

CLAIMS

What is claimed is:

- 5 1. A software system with a two tier arrangement
for threads support, comprising:
 virtual machine including a threads interface
layer having a set of methods that provide thread
support in the virtual machine according to a
10 standard threads interface associated with the
virtual machine;
 native threads interface layer that provides a
set of methods that adapt the methods of the threads
interface layer to a platform which underlies the
15 software system.
2. The software system of claim 1, wherein the
standard threads interface is a Java threads class.
- 20 3. The software system of claim 1, wherein the
threads interface layer maintains a set of context
information for each of a set of threads in the
software system in terms of the virtual machine.
- 25 4. The software system of claim 3, wherein the
context information includes a value for each of a
set of virtual machine registers associated with
corresponding thread.
- 30 5. The software system of claim 1, wherein the
native threads interface layer maintains a set of
context information for each of a set of threads in
the software system in terms of the platform.

6. The software system of claim 5, wherein the context information includes a value for each of a set of processor registers associated with the platform.

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7. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to suspend a particular thread.

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8. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to resume a particular thread.

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9. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to wait for completion of a particular thread.

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10. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to yield execution to another thread.

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11. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to stop an execution of a particular thread and to clean up a set of structures associated with the particular thread.

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12. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to set a priority of a particular thread.

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13. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to obtain a priority of a particular thread.

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14. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to obtain an identifier of a currently executing thread.

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15. The software system of claim 1, wherein the native threads interface layer includes a method that enables the threads interface layer to select a thread for execution.

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16. A method for providing threads support for a virtual machine in a software system, comprising the steps of:

25 providing a threads interface layer in the virtual machine including a set of methods that provide thread support according to a standard threads interface associated with the virtual machine;

30 providing a native threads interface layer having a set of methods that adapt the methods of the threads interface layer to a platform which underlies the software system.

17. The method of claim 16, wherein the methods in the threads interface layer perform the step of maintaining a set of context information for each of a set of threads in the software system in terms of the virtual machine.

18. The method of claim 17, wherein the step of maintaining a set of context information comprises the step of maintaining a value for each of a set of virtual machine registers associated with corresponding thread.

19. The method of claim 16, wherein the methods in the native threads interface layer perform the step of maintaining a set of context information for each of a set of threads in the software system in terms of the platform.

20. The method of claim 19, wherein the step of maintaining a set of context information comprises the step of maintaining a value for each of a set of processor registers associated with the platform.

21. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of suspending a particular thread.

22. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of resuming a particular thread.

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23. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of waiting for completion of a particular thread.

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24. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of yielding execution to another thread in response to a request from one or more of the methods in the threads interface layer.

25. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the steps of stopping execution of a particular thread and cleaning up a set of structures associated with the particular thread.

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26. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of setting a priority of a particular thread.

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27. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of obtaining a priority of a particular thread.

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28. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of obtaining an identifier of a currently executing thread.

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29. The method of claim 16, wherein the methods in the native threads interface layer include a method that performs the step of selecting a thread for execution.

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